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# Household Livelihood Recovery after 2015 Nepal Earthquake in Informal Economy: Case Study of Shop Owners in Bungamati

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## Abstract

The 2015 earthquake caused widespread damage in Nepal causing monetary loss of billions of dollars. Majority the households in Nepal are engaged in informal sector and relies heavily on local market and tourism. In Nepal, livelihood and households are not only linked through livelihood, built space, goods and services, but also through culture and traditions. As a result, understanding their linkage is important for effective recovery to further facilitate strengthening of community resilience. This article focuses on household and livelihood recovery within the first two years of the earthquake in traditional settlements Bungamati. Participatory mapping followed by narrative analysis of the interviews is used for understanding the linkages. Narrative analysis of the field interviews conducted with the shop owners generated six types household assets. Further, these assets were linked with the various coping strategies in the post disaster situation. The findings suggest three main type of coping strategies for livelihood recovery namely; Intensifying use of capitals, dependency on social capital and mitigate consumption and expenditure.

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**Keywords:** Disaster Recovery; Nepal Earthquake; Informal economy; Household; Livelihood

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## 1. Introduction

The 2015 Gorkha earthquake caused extensive damage to Nepal's economy at a juncture when the country is in a transition from a rural to an urbanizing economy. The earthquake caused a loss of approximately 7 billion US dollars, affecting the productive sectors and markets in Nepal [1]. In Nepal, informal economy is growing faster than

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the formal economy and is the main generator of livelihood [2]. Statistically, the largest share of Nepalese enterprises are family and micro enterprises, majority of which are part of informal sector and combined with informal farming form part of the informal economy [3]. The informal sector denotes family enterprises and micro enterprises and workers working there and has wage, whereas informal economy covers all types of economic activities outside the formal sector where the informal sector is one of the significant components and presence or absence of wage is not considered a factor. Further [4] defines informal sector as households with at least some market production. Informal sector livelihood is generally associated with low social protection, low wages, poor working conditions, limited access to insurance and government's disaster management benefits and compensations [4, 5]. As a result, households having livelihood in the informal sector are highly vulnerable to natural disasters. In Nepal, Post Disaster Need Assessment acknowledged that the informal sector was one of the most affected sector but, due to lack of data, the extent of damage was not assessed [1].

[6] defines economy as livelihood or economic process of provisioning embedded in social relations. Considering household as the basic unit of the society, such social relations originate at the household level. In informal economies, household play dual role of a producer and a consumer and is linked with livelihood by circular income flow. Disaster impacts the circular income flow of the household. Hence economic recovery along with housing recovery and psychological recovery contributes to household recovery [7]. [8] reports, household identify livelihood as their greatest recovery priority. On the other hand, past researches on disaster recovery indicate reconstruction being prioritized over livelihood recovery [9]. Echoing [10], such contradictions beg for a detailed study to understand the household livelihood recovery process in informal economy. Nepal with its high dependency on the informal economy and earthquake in 2015 provided an opportunity to study the recovery process from the initial phase.

The research takes a qualitative case study approach in its attempts to understand the process of household livelihood recovery in informal economy in the first 2 years after the earthquake. Bungamati, a traditional Newari settlement in Kathmandu valley is selected as the study location. The area has developed into a market center and tourist destination due to its cultural heritage, Newari architecture and handicrafts. The article is divided into seven sections where the first section introduces the topic, the following two sections cover the theoretical framework of household and livelihood recovery, characteristic of Newari community and methodology of the study. Section 4 and 5 introduces the case study area and findings while the last two sections discuss the major findings and concludes the study. It is expected that the outcome of the paper will aid policy makers in designing disaster recovery interventions for informal economy addressing their real needs.

## 2. Conceptual Framework for Household and Livelihood Recovery

This section focus on analysis of various literature on household and livelihood recovery to develop a conceptual framework for the study in Bungamati. This need arises from the study by [11] suggesting that Nepalese livelihood scenario is complex and applying various models may lead to different outcomes, as they do not relate to local conditions and community behavior. Furthermore, [12] concluded livelihood diversification varies with local conditions and should be studied in the local context.

Scholars of disaster management though agree on the definition of disaster by United Nations but are divided over disaster recovery outcome. [13] considers disaster recovery as attaining pre-disaster status, while [14] relates it to build back better. [15] opine recovery is a never-ending dynamic process varying across time, space and perception. [10] adds that this process leads to a new stable state distinct from the pre-disaster state. Agreeing to [16] understanding of disaster recovery as “*social process*”, the above-mentioned three outcomes of the recovery process represent different stage of the process and this will vary with every disaster. [17] connects recovery to resilience and critics that existing indicators for business resilience and recovery are insignificant and do not give a holistic understanding due to lack of data.

[18] defines livelihood as “capabilities, assets (including both material and social resources) and activities required for a means of living”. [12] further elaborates that livelihood comprises of both incomes in cash and in kind. Considering a growing trend among Nepali households to rely on multiple income sources which necessitates to widen the scope of circular income flow by replacing the word “Business” with livelihood. In line with [19], households owning farms and non-farm enterprises are struck twice, once at household level and then in their

livelihood. [20] suggests at household level, the assets available are a super set of capitals which can be used to create income or other benefits for the household. Further she discusses four strategies to cope with impoverishment. First, by increase resources usage, second, change the quantity of human capital human capital, third, drawing on stocks of social capital and lastly, by limiting a decline in consumption. So, at the basic level, household and livelihood are connected by the circular income flow where households provide labour, land and capital and in return gets wage, income and goods and services.

### 3. Methodology

In context of Nepal, [22] shares that growth of shops have connected the inward-looking communities with the outside market facilitating not only exchange of goods and services but also information and culture resulting in new marketing opportunities for the formal sector. Considering this, the present study was conducted focusing on the shop owners in Bungamati. The study design is qualitative in nature and uses both primary and secondary data to achieve the objectives. Semi-structured interviews, focus group discussion, photo documentation and field observations were employed for collecting primary data. Literature review is done to develop understanding of the Newari society and to identify the assets and strategies adopted for recovery by the community. The choice of using qualitative interviewing and observation have a specific relevance to the study as it helps to understand and explain complex phenomena more comprehensively and provides opportunity to the interviewees to bring up their own ideas and thoughts. The stratified random sampling is employed in selecting the interviewees from shop owners in Bungamati, which allowed me to identify the informants who were more likely to provide data that were in-depth and relevant to the research questions. A total of 24 interviews were conducted with shop owners (coded as H1, H2..) and one interview each was done with Project staff of OXFAM GB and UN-Habitat due to their active engagement with the recovery process. On an average, each interview time was between 20 to 45 mins, involving questions on the nature of damage to shop and household, restarting of the shop, recovery process, changes in the household and livelihood. The interviews were recorded on voice recorder and field notes were made during interactions. The medium of interaction had been mainly Hindi which the first author and majority of the people in Bungamati can speak. In three cases communications were made in local Newari and Nepali language which was subsequently translated to Hindi by local youth volunteering for the study. All other interviews were conducted in English. Narrative analysis of the interviews and FGD is done to generate various themes and inductive analysis is done to link and understand the interlinkages of the various themes generated from the narrative analysis. For classification of household assets and recovery strategies, [20] classification is followed. Every factor is considered as a distinct case as a part of the study and sample size was decided based on criteria of creating a distinct dataset and hence interviews were conducted till there was no new findings.

### 4. Understanding Newari Community and study area of Bungamati

This section first discusses available literature on Newari settlements to identify various assets common to Newari community and then introduces the study area. [6] in her research on cultural politics of markets among Newars, suggests household is the basic social and economic unit of Newari society where finances are managed by strict age and gender based division of labour. [21] studying rural livelihood suggests rural households with limited or no access to resources follow multiple survival strategies. Interestingly, a typical Newari household has multiple income source which is facilitated by the extended joint families. In this respect, [22] have compared Newari merchants' household with structured corporate system and suggests this household hierarchies and division of labour leads to livelihood diversification and acts as a safety net against shocks. [23] explains the duality among the Newari settlements by saying it is urban in its physical form but rural and inward looking in socio-economic structure.

#### 4.1. Understanding the Medieval Settlement of Bungamati

Bungamati is one of 52 traditional Newari settlements in Kathmandu valley known for its strong community bonds, small scale enterprises and heritage (Figure-1). Bungamati is an important market place located around 8km from Kathmandu and has a population of 3,908 people comprising of 891 households [24]. [25] puts the population at 5,004 (5.9) and suggests agriculture as the main occupation but wood carving, carpet making are also present as livelihood. The average household size is 4.6 against the national average of 4.9 which is a divergence from the traditional Newari's household of extended family. The median annual household income and expenditure per head are 507 and 442 USD respectively where the highest source of income is from work abroad followed by business while expenditures heads include food, education and medical expenses. The income is lower than national per capita income of 661 USD [26]. Bungamati has food surplus for 86 days per capita and the Newars have 78 days' per capita food balance are second to Bahuns and Chetris who poses 35 percent of productive land [25]. The 2015 Gorkha earthquake damaged a total of 674 houses of 891 houses varying from partial to fully collapsed structures.



Figure- 1. (a). Key map of Bungamati; (b, c d) photos of various shops in Bungamati; (e) Damage to shops

## 5. Findings

This section is divided into three parts, first the field data is presented, next section identifies various household assets and last part discusses different recovery strategies. Creation of shop inventory of operational shops in January 2017 followed by in-depth interviews of shop owners in Bungamati gave a rich insight into characteristics of the household and livelihood recovery. There are 130 shops in Bungamati which caters to mainly 3 sectors, manufacturing, tourism and service as per 1992 industrial act. Majority of the shops (84%) in Bungamati are owned by high caste Newari with a domination of Shrestha, Shakya, Tuladhar community while only 5 shops belong to non-Newari. 14 different categories of shops were identified of which majority are grocery stores followed by wood carving. The following section details the findings from the field.

### 5.1. Household Assets

Majority of the shop owning households surveyed had multiple source of income ranging from shops, farming, salaried job, part-time work, renting of space among others. Contrary to initial assumptions that households with shops earns their primary income come the shop exceptions was seen in case of (H-15) who runs a shop to augment his earning from the caste based occupation of a barber. Further such exceptions were noticed in women head shops where the main income comes from other husband salary or work. All shops are sole proprietary type and in most cases the family members are contributing members except for wood carving, metal carving and tailoring where local people are employed on daily wage but such instances are very few. The household members are not paid any wage for their contribution to the business. A total of 64% of the shops have less than 2 staff. The monetary saving comes mainly from the non-farm based income while storing of food crops by drying is also a strategy at the household level which add to household food sufficiency. Further in case of women owned shops, the income from the shop is an additional income for the household. All shops before the earthquake had saving but majority reported they do not save now due to loss of monetary income. None of the interviewed shops have insurance though most them knew the benefits of insurance.



- Land as a natural asset

Though most of the household do farming income from the shops which is important for running various expenses of the family. This was explained by the owner of a wood carving shop who opened within 1 month of the earthquake (H-1); *Like most people in Bungamati I learned wood carving initially from my brother. I have 3 Roappni (1 Roappni= 508.7 sq meters) land in which I grow Potato, Rice, Snake Gourd and Wheat for household consumption. My family can survive for 3 months on this but for buying other food items, cost of child's day care and health expenses shop's income is needed. I had savings though not separate for household. During the closure of the shop, I spend from my savings.* Similar experiences was shared by other households (H-7, H-13,H-21).

- Household and extended family as source of social, cultural and economic capital

In Newari culture dowry (Gifts brought in by bride to house of bridegroom. The gifts can be utensils, gold ornaments among others) is prevalent but not compulsory and act as a capital setting up of shops. One such instance shared by a tea shop owner (H-13) in the bus park area; *This shop is in my name and I took loan from my father to setup the shop. I invested in the business by selling my gold jewelry from dowry. I did not move to my father's house as it collapsed in the earthquake but sent relief materials to him.*

Capital for starting shops come from household savings or is borrowed from family and friends. After the earthquake, the family and friends provided credit to ease out household expenditure. In one instance friends brought in order which motivated shop owners to restart working. Taking credit from local cooperatives and Guthis are preferred over banks due to lesser paperwork and no mortgaging is required. Household expenses mainly cover food, medicine and education among others and due to loss of closure and subsequent loss of income from shop, H-20 who runs a wood carving shop closed his business for 3 months shared; *Before the earthquake, I use to pay for my 2 daughter's nursing education fees (90,000 NPR/person/year) from the income of the shop and by selling vegetables. After the earthquake, I sold 4 Anna ( 1 Anna = 31.79 Sq m.) of my 4 Roppani land. Further my daughter got loan from her friend.* While a metal shop owner (H-4) and tea shop owner (H-24) shared; *We had to manage and reduce our expenditure on food, travel and spending on festivities.* Similarly, H-21 shared; *We stopped using milk in tea and stopped having biscuits.*

- Expanding income portfolio of the household

Increasing number of income sources at the family level but engaging non- earning members was noticed among households. The women were likely to get engaged in shops or other part time jobs. This was seen in case of a jewelry shop owner (H-7) in the bus park who restarted after 1 year shared his experience; *I was the only earning member before the earthquake and my earnings was from the business I do in the shop. My four storey house has only the ground floor remaining. My two brothers did not work before the earthquake but after the earthquake both started working.*

- External Remittance, livelihood diversification and migration

A Teashop owner (H2) in similar lines shared; *After my house collapsed in the earthquake I closed my restaurant for a year and now I have started a tea shop. My son use to work in Saudi Arabia and send money. I spent from my savings to pay for my grandchild's school fees.* In addition, various diversification was noticed in shops where owners added new products to increase the sale (fig. 1.c). These shops are the ones who dealt with the local tourist and due to loss of tourism looked at other options. Post- earthquake in Bungamati, the number of new shops have increase in relation to pre-earthquake period. This is due to rise in rent, loss in customer base and other operation cost in Patan area leading shifting of shops. Also, within Bungamati, shops which were severely damaged or had collapsed, these shops moved into new location which are more centrally located to recover the loss in Earthquake.

- Delayed repair and reconstruction

It was observed in the surveyed shops, damages caused by the earthquake have not been repaired (Fig. 1e). The reason being the sales have gone down and further government compensation amount for the earthquake has not been distributed. At the same time building materials have become dearer due increase demand and diminishing supply.

## 5.2. Identifying household assets in Bungamati

From the findings, the household assets can be divided into cultural, social, economic, physical and natural asset each of them are listed out in detail in table-1.

Table 1. Identified household level assets that influences livelihood at in Bungamati

Category of Assets	Identified Assets in Bungamati
Natural	The land is an important natural resource for people of Bungamati. Most the shop owners have farm lands which generates income and food for household. The Newari household have high food sufficiency which varies from 3 to 9 months as seen from the interviews. Further land also gives monetary income to households in Bungamati. In two cases, it was seen that land was leased out to brick kiln. Such income is used as financial capital in shops and for household consumption.
Cultural	The concentration of shops among higher caste relates to the existing caste hierarchy, power structure and access to resources in the Newari society and relate to caste based occupations where Shrestha and Tuladhar were merchants and Shakya were priest and goldsmith. The culture and tradition of Newari society create asset at the household level. The dowry system though not compulsory among Newari household but is often followed specially among the merchant caste. The gold and silver jewelry and money which is an asset at the household is invested in business. Further every household is part of a Guthi (caste based groups organizing festivals and funerals). The Guthis lease out Guthi land to household and in return get share of the produce which is sold in the market. The household can borrow money from the Guthi. The existence of occupation caste (barber) which gives monetary income and grains. The grains are used for household consumption and excess is sold.
Physical	Households in Bungamati use the ground floor for opening shops. This traditionally this space used to be for cattle and storing of grain based on the Newari hierarchy of space and sense of impurity. The owners in Bungamati either rented out this space or started their shop as a result became a source of income for the household.
Social	In Bungamati, households have close ties with each other and typical of Newari community has extended families. Further family extension happens through marriage. The extended family is an asset at the family level and as seen from the interviews they become a source of financial capital for investment in starting new livelihood options. Further in Bungamati, exchange of labour between household for farm activities known as Balighar system is still practiced.
Economic	All households surveyed reported of multiple income sources for the household and had saving. There is no separate savings for household and livelihood. Bungamati has high remittance from outside Nepal which adds to the economic asset of the household.
Human	The involvement of family members as a contributing member of the shop and in farming and other income generating activities is human asset. This gives the household no extra financial income and there is a common goal bettering the family's financial condition.

## 5.3. Strategies for household and livelihood recovery

The strategies to cope with impoverishment identified at household level in Bungamati are categorized in to 3 distinct heads (Table-2) based on the categorization by Rakodi (1999).

Table 2. Identified coping strategies for household and livelihood recovery

Heads for coping strategies	Strategies identified in Bungamati
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Strategies to increase resources, by intensifying the use of capital	<ul style="list-style-type: none"> <li>• Diversification of business to include new products</li> <li>• Involving household member mainly women to start new shop</li> <li>• Starting of household part time work for additional income</li> <li>• Involvement in cash and food for work programme by NGOs</li> <li>• Temporary migration from Bungamati to other areas for work</li> <li>• Migration of shops from outside Bungamati to Bungamati due to rise in operating cost and loss in business. Migration of shops within Bungamati to more tourist frequented areas</li> <li>• Use of social media for reaching out to customers outside Nepal</li> <li>• Noncontributing household members start earning</li> <li>• Raising price of finished products</li> </ul>
Strategies involving drawing on stocks of social capital (Bonding, bridging and linking capital)	<ul style="list-style-type: none"> <li>• Remittance from household members staying abroad</li> <li>• Borrowing from friends and extended family and getting new orders from friends and family ensure advance payments and brings in cash to the household</li> <li>• Government and NGOs disaster financial aid</li> </ul>
Strategies to mitigate or limit a decline in consumption, and impact on physical, social and natural capital	<ul style="list-style-type: none"> <li>• Reducing expenditure on food brought from market like meat, snacks and tea</li> <li>• Reducing travel, entrainment and spending on clothes and festivities</li> <li>• Shifting of school due to inability to pay fees</li> <li>• Selling of agriculture land</li> <li>• Delayed repairing of housing and shop damage</li> </ul>

## 6. Discussion

The case study of Bungamati highlights the complexity of intertwined socio-economic, physical, cultural and psychological factors linking household and livelihood recovery in informal economy. From the study, based on the usage of household assets it can be classified into active, dormant and transforming. Where active assets are the ones which are used on regular basis for supporting livelihood (labour, savings). While dormant assets are the ones which do not generate capital in normalcy but generate capital in crisis and are connected by socio-cultural ties. Lastly, transforming assets are the assets whose value changes after a disaster and are used for generating capital to support recovery (land).

Contrary to [20] findings that livelihood diversification is a sign of household moving towards wellbeing, in Bungamati it was experienced that post disaster diversification follows a copycat principal as have been observed in normalcy in other Newari settlements by [6] and [22]. This suggest that such actions do not follow a logical choice, based on the market condition but relate to Newari merchants being non-innovator and low risk takers. This in case of such small informal settlements create too much local market competition which finally may lead to conflict of interest and survival of the fittest.

Further, social assets (family and friends) in Bungamati do not directly support livelihood recovery but rather supports household expenditures due to trust issues arising from nonexistence of legal regulations for not returning the loans. This resulted in a few cases where the family members supported livelihood by getting new orders which would bring in financial capital in the form of advance payment. Further, such traditional communities have social ties within limited geographical locations based on institution of marriage (in this case Kathmandu valley) and due to widespread impacts of disasters, such social ties may not be effective for recovery as they are affected by the same disaster.

## 7. Conclusion

The study shows household and livelihood recovery are not mutually exclusive and role of household assets and strategies for generating capital for livelihood play crucial role. The strategies for generating capital keeps varying



with households and this void is filled by strong socio-cultural ties at the community level. It is observed that informal economies like Bungamati depend on social capital to recover their income generating livelihood. In addition, the study highlights dichotomy in the society where a socio-culturally closely knit community is so far apart economically due to trust issues and internal competition. The constant diversification based on trial and error reinforces that recovery is a dynamic social process with no definite outcome and exogenous aid plays a limited role. As a result, such communities may respond effectively to a disaster immediately after a disaster but the economic recovery process outcomes will depend mostly on household effort. This begs for a shift in the current recovery policy in Nepal from mere physical recovery to a holistic household centric socio-economic recovery to enable people to reconstruct on their own and thus strengthening community resilience through recovery.

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